October 2016 Admission
Akita University Graduate School of International and Resource Sciences
Special Education Course "New Frontier Leaders on Resources"
Application Procedures

Schedule

	Date
Application period	August 8–12, 2016
Selection date	To be announced
Results announced	To be announced

About the Akita University Program for Leading Graduate Schools

The Doctoral Course Leading Program

The "Doctoral Course Leading Program" seeks to provide talented students with the broad perspective and creativity that will enable them to become global leaders in a wide range of fields, including industry, academia, and government. To achieve that objective, Akita University has established and is developing a world-class five-year doctoral program that brings together exceptional teachers and students from Japan and abroad; encourages participation by businesspeople, academics, and government officials; and is interdisciplinary in approach. This initiative supports the fundamental reform of graduate education and encourages the formation of the type of graduate school that is most appropriate for an institution of higher learning.

The program has identified three patterns of leaders based on the categories of human resources that are required and the issues that need to be resolved: "All-Around Model (All-Around Leader Training)," "Multidisciplinary Model (Multidisciplinary Leader Training)," "Only-One Model (Only One Leader Training)." The New Frontier Leaders Training Program on Rare Metals and Other Resources, which is centered on the Akita University Graduate School of International Resource Sciences, is as an "Only-One Model" program.

The Doctoral Course Leading Program has clearly established a training program that will provide students with the following competencies to foster leaders who can play a broad global role in industry, academia, and government.

[Competencies required of a global leader in industry, academia, and government]

(1) The ability to act courageously and globally based on solid values and in cooperation with others
(2) The ability to identify issues by oneself, form hypotheses, and apply one's knowledge to find creative solutions
(3) The ability to apply a high degree of expertise, an international mindset, and broad-based knowledge in order to grasp the bigger picture and identify the essence of an issue

The New Frontiers Leaders Training Program on Rare Metals and Other Resources

Today's resource issues—the dramatic rise in the price of natural resources, the disparity and exhaustion of resources such as rare earth, unstable of supplies, the preservation of biodiversity, and so on—are becoming global problems that are shared by human society in the 21st century. In order for Japan, a country lacking its own natural resources, to survive the fierce competition to acquire such resources, we must take a mid- to long-term perspective and develop exceptional human resources, but to do so will require that we strengthen our country's resource-related education and raise it to the global level.

At the same time, resource development is also becoming increasingly complex in recent years, requiring a broad range of knowledge and the ability to handle such issues as international relations; multicultural communications (an understanding of the local people and their cultures); the biological and environmental impact of each type of metal, including rare earth; and so on. Leadership is also required and comprehensive human resources, including literacy and a sense of ethics must be cultivated.

Given that context, this program has established a "Special Course on New Frontiers in Resources" with the objective of training global leaders with expertise on resources and the ability to apply and implement what they have learned. The course will develop human resources with the broad perspective to tackle the many issues surrounding resource development in the 21st century, including the rare metal/rare earth issues that have emerged in recent years, resource disparities, development of remote regions, the decline of ore quality, and deterioration of the production environment. In other words, it will train "New Frontier Leaders in Resources" who are equipped with the organizational skills and expertise to take the lead on everything from global resource surveys to the latest production technology or high-level recycling systems for rare metals, and who have an international perspective—including strengthened English skills and an understanding of other cultures—creative investigative skills, problem-solving skills, resource literacy, and the ability to formulate policies.

Special Course on New Frontier in Resources

The Special Course on New Frontier in Resources is a five-year doctorate course at the Graduate School of International Resource Sciences of Akita University. The program comprises the Earth Resource Science Course and the Resource Development and Processing Course.

[Earth Resource Science Course]

In addition to understanding the terrestrial origins and genesis of rare and other metal resources and non-metallic and energy resources, the course provides integrated research and education in geochemistry and resource geology. Students develop resource concepts through resource and geochemistry elements. Learning encompasses original substances and genesis mechanisms for natural resources, deposit formation mechanisms for metal resources, including rare metal and earths, the sedimentology of such energy resources as petroleum and methane hydrate, and various advanced global positioning and remote sensing exploration technologies for underground resources.

[Resource Development and Processing Course]

Students acquire foundations in the theory of resource development, which is essential for producing and developing the earth's rare metals and other resources, rock mechanics, mining, ore dressing, resource processing engineering, and refining, including for rare metals and raw materials purification. This work also

covers new recycling technologies and systems design, environmental technologies, and project management. Students leverage knowledge in those areas to master comprehensive knowledge and skills relating to resource production technologies and recycling, including economically evaluating resource development, and market analysis.

1. Number of people to be admitted

Course Name	Number Admitted
Earth Resource Science	5
Resource Development and Processing	5

2. Application requirement

Applicants must be enrolled in the first year and second year of the Master's Program or enrolled in the first year of the Doctor's program at this university and must meet all of the following criteria:

(1) Clearly understands the objectives of the program
(2) Intends to complete a doctoral degree at this university (see note 1)
(3) Promises to remain in this program, if selected as Japan Society for a Promotion of Science (JSPS) research fellowship (DC1) after applying.
(4) Recognizes that on the doctoral diploma it will note that they have completed this program

Note 1: Those students who intend to seek employment in the corporate sector upon completion of their Master's degree are not eligible to apply for this course.

3. Financial Aid System

Various systems of financial assistance are in place to reduce the economic burden of those enrolled in this program and allow them to focus on their academic work, such as grants, teaching assistant and research assistant positions, assistance for overseas fieldwork, and internship assistance.

4. When and Where to Apply

(1) Application period

Applications must be received during the period of August 8–12, 2016.

i) Applications may be submitted in person between the hours of 9 a.m. and 4 p.m.
ii) If submitting by mail, applications must be sent as **registered mail**. In red ink, please write on the envelope "Contains Application for Graduate School of International Resource Sciences Special Course New Frontier Leaders on Resources." The package must arrive at the university no later than 4 p.m. on August 12, so please send it early enough to ensure that it will arrive in time.

(2) Where to submit the application

Leading Program Office
Graduate School of International Resource Sciences
Akita University
1-1 Tegata Gakuen-machi, Akita-shi AKITA 010-8502
Tel: (018) 889-2308

5. Application Procedures

(1) Application Materials

Document	Notes
Application form	Please fill out the application form provided by this Graduate School.
Research plan	Please submit the research plan form with a description in approx. 500 words (in Japanese, approx. 1000 characters) of the research topic you are currently working on, the status of your research, your objectives, or the vision you have for the research.

(2) Points to consider when applying

i) Applications with errors cannot be accepted, so please be sure to double-check your application to make sure that you have entered all the required information correctly.

ii) Once submitted, application materials cannot be returned or revised.

iii) If any misrepresentations are found in the application materials, students may be expelled from the course even after being selected for this program.

iv) If there is any change to the "preferred mailing address" you indicated on the application form after the application has been submitted, please notify the office immediately.

v) The Research Plan may be prepared using a computer application as long as the form and style match the form designated by this Graduate School.

6. Selection Process

Selection will be based on the combination of an achievement test, interview, application materials, and the results of the Graduate School entrance exam.
Regarding to the test schedule, place, and waiting area, Leading program office will notice to the applicants later. Be carefully follow the information from Leading program office.

7. Notes

(1) On the day of the screening, applicants must come to the directed location 30 minutes prior to the screening.

(2) The cut-off for late admittance will be 10 minutes after the screening has commenced. Applicants will not be admitted after that time.

(3) During the screening, applicants are expected to follow all directions given by the exam proctor.

8. Announcement of Acceptances

Leading Program office gives notice to the applicant later.
Under no circumstances will results be given over the phone.

9. Other

All inquiries regarding the application procedures should be directed to:

Academic Affairs, Leading Program Office
Graduate School of International Resource Sciences
Akita University
1-1 Tegata Gakuen-machi, Akita-shi AKITA 010-8502
Tel: (018) 889-2308

October 2016 Admission
Akita University Graduate School of International Resource Sciences
Application for Special Education Course "New Frontier Leaders on Resources"

Receipt No.	*		
Name	(First/Last/Middle)	Date of birth (Y/M/D) Age Sex (circle one)	/ / yrs. M F
Former University			
Qualification to Apply (check ☑)	Akita University Graduate School of International Resource Sciences ☐Master's course Earth Resource Science ☐Master's course Earth Resource Engineering and Environmental Science ☐Doctoral course Geosciences, Geotechnology and Materials Engineering for Resource		
Desired Course (check ☑)	☐Earth Resource Science course ☐Resource Development and Processing course		
Preferred Advisor			
Preferred Mailing Address	(TEL:)		
E-mail Address			
Alternate Contact Information	(TEL:)		

Instructions:
1. Please leave blank the space with an asterisk.
2. Please use a pen and print clearly.

Akita University Graduate School of International Resource Sciences

Receipt No.	*

Research Plan

Desired Course:

Name of Applicant:

Signature:

Topic/Field of Research	
Summary of Research Plan (approximately 500 words in English, or approximately 1,000 characters in Japanese.)	

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